

ABSTRACT OF THE DISCLOSURE

An object of the present invention is to provide a method for producing metallic iron, in which after a mixture including a carbonaceous reducing agent and iron oxide is fed onto a hearth of a moving hearth reducing-melting furnace and is then heated so that the iron oxide is reduced and melted, metallic iron to be obtained is cooled and is then discharged outside the furnace for recovery. In the method described above, even when powdered metallic iron is squeezed into the surface of the hearth, or the hearth is damaged by slag infiltration and corrosion, the removal and repair can be easily performed, the operation rate and maintainability of the hearth can be improved, and hence a long continuous operation can be suitably performed. According to the present invention, metallic iron is produced by the steps of, prior to the feed of raw agglomerates, bedding a granular hearth material on the moving hearth for forming a layered renewable hearth, which can be renewed; removing part or the entirety of the renewable hearth, which was degraded during operation, and then newly feeding the hearth material for forming a new renewable hearth; leveling the surface of the newly formed hearth; and subsequently feeding the mixture.